FIG. 1

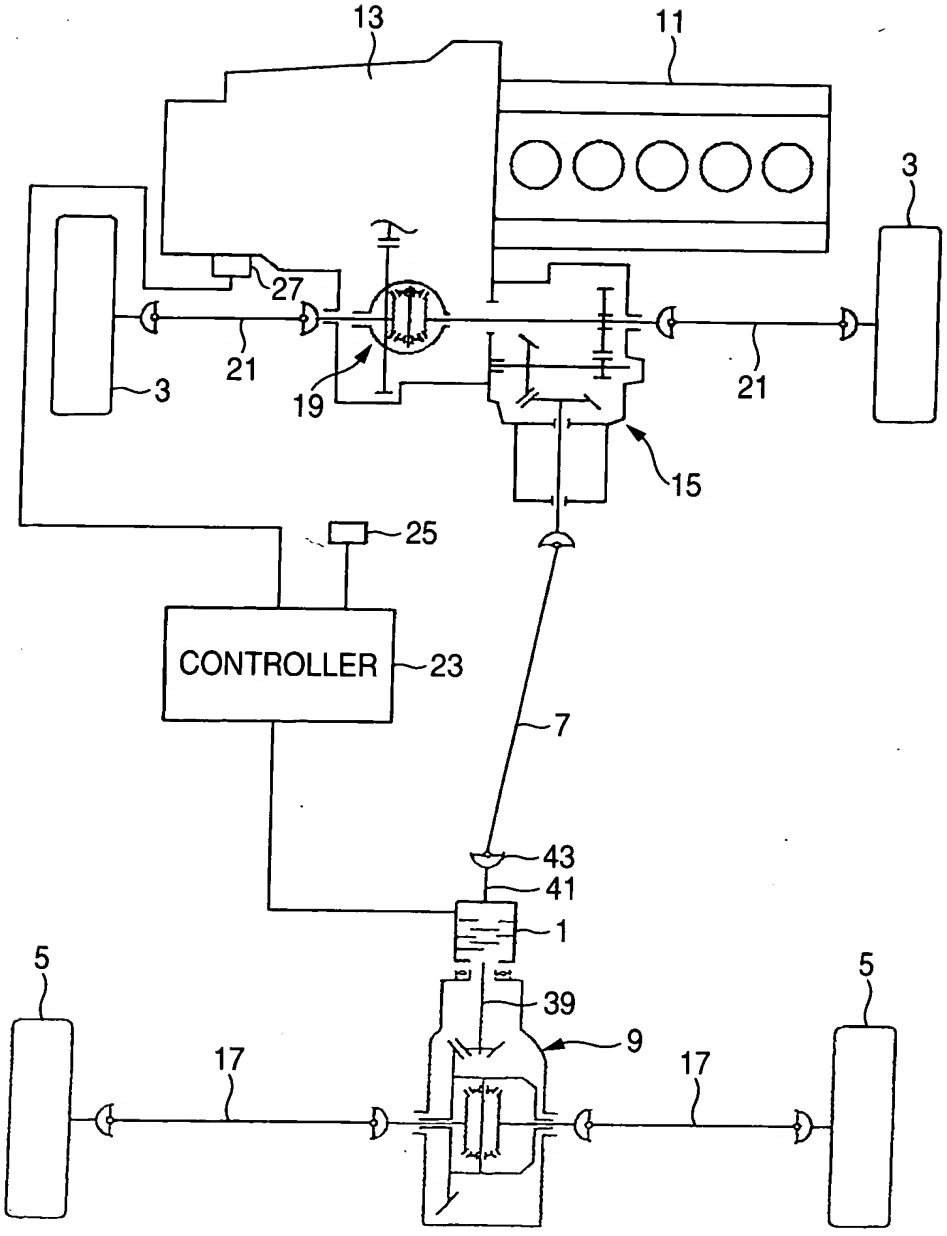

FIG. 2

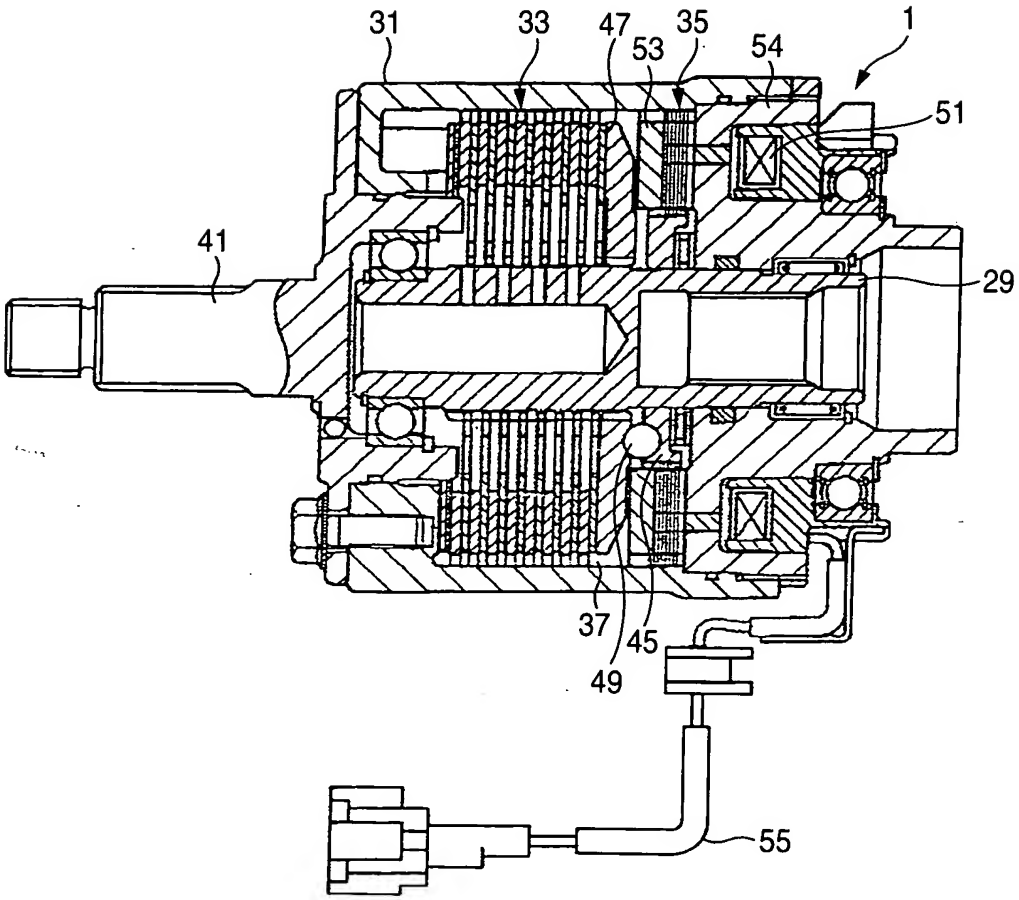

FIG. 3A

FIG. 3B

FIG. 3C

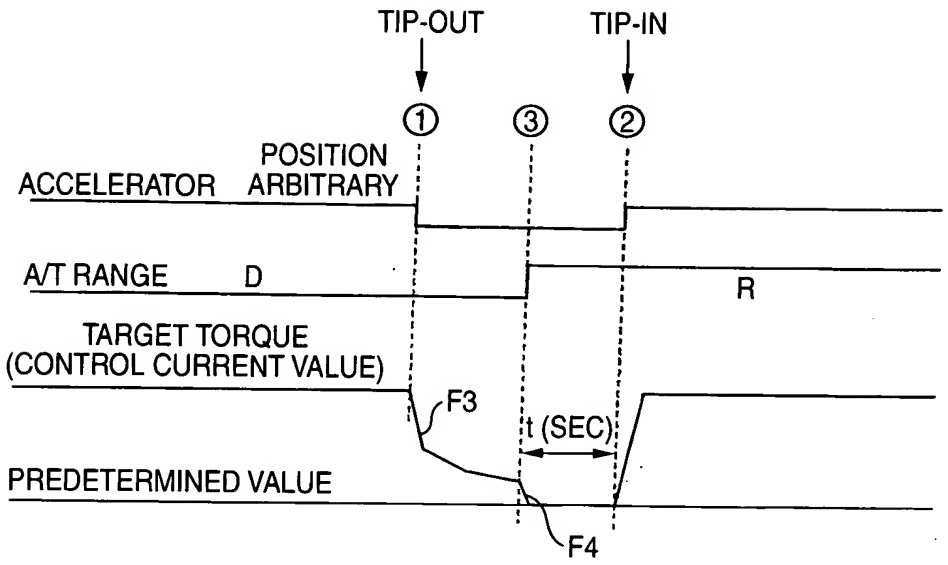

FIG. 4A

FIG. 4B

FIG. 4C

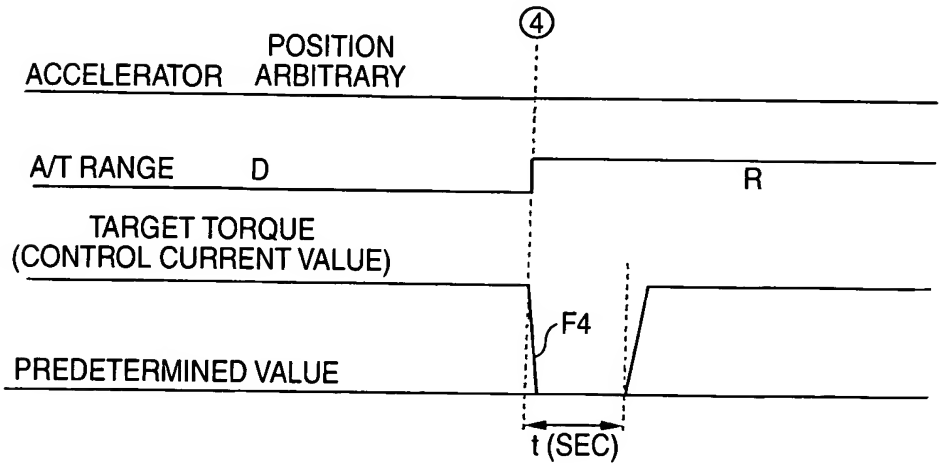

FIG. 5A

RANGE
P
R
N
D (1ST-X)

FIG. 5B

RANGE (THIS TIME)	DIRECTION OF A/T RANGE (THIS TIME)
P	RETAINED (DIRECTION OF PREVIOUS RANGE)
R	0
N	RETAINED (DIRECTION OF PREVIOUS RANGE)
D	1

FIG. 5C

DIRECTION OF PREVIOUS A/T RANGE XOR DIRECTION OF A/T RANGE OBTAINED THIS TIME	INVERSION OF A/T RANGE
0	NON-INVERTED
1	INVERTED

XOR: EXCLUSIVE OR RESULT

FIG. 6

DETERMINATION OF INVERSION OF RANGE	TARGET TORQUE	TARGET TORQUE RETENTION TIME	LIMITATION ON REDUCTION OF TARGET TORQUE
INVERTED	T (EMPLOYED IN THE FORM OF CONSTANT)	t (EMPLOYED IN THE FORM OF CONSTANT)	REDUCTION METHOD B (LINE SEGMENT F4)
NON-INVERTED	CONVENTIONAL VALUE	0 NON-RETENTION	REDUCTION METHOD A (LINE SEGMENT F3)

FIG. 7A

TARGET TORQUE	LIMITATION ON REDUCTION OF TARGET TORQUE
T2 < TARGET TORQUE	L3
T1 < TARGET TORQUE ≤ T2	L2
TARGET TORQUE ≤ T1	L1

FIG. 7B

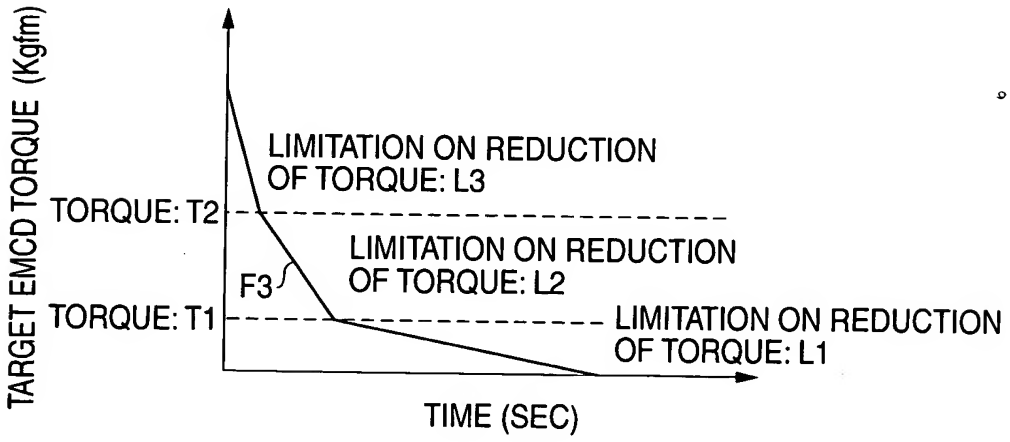

FIG. 8

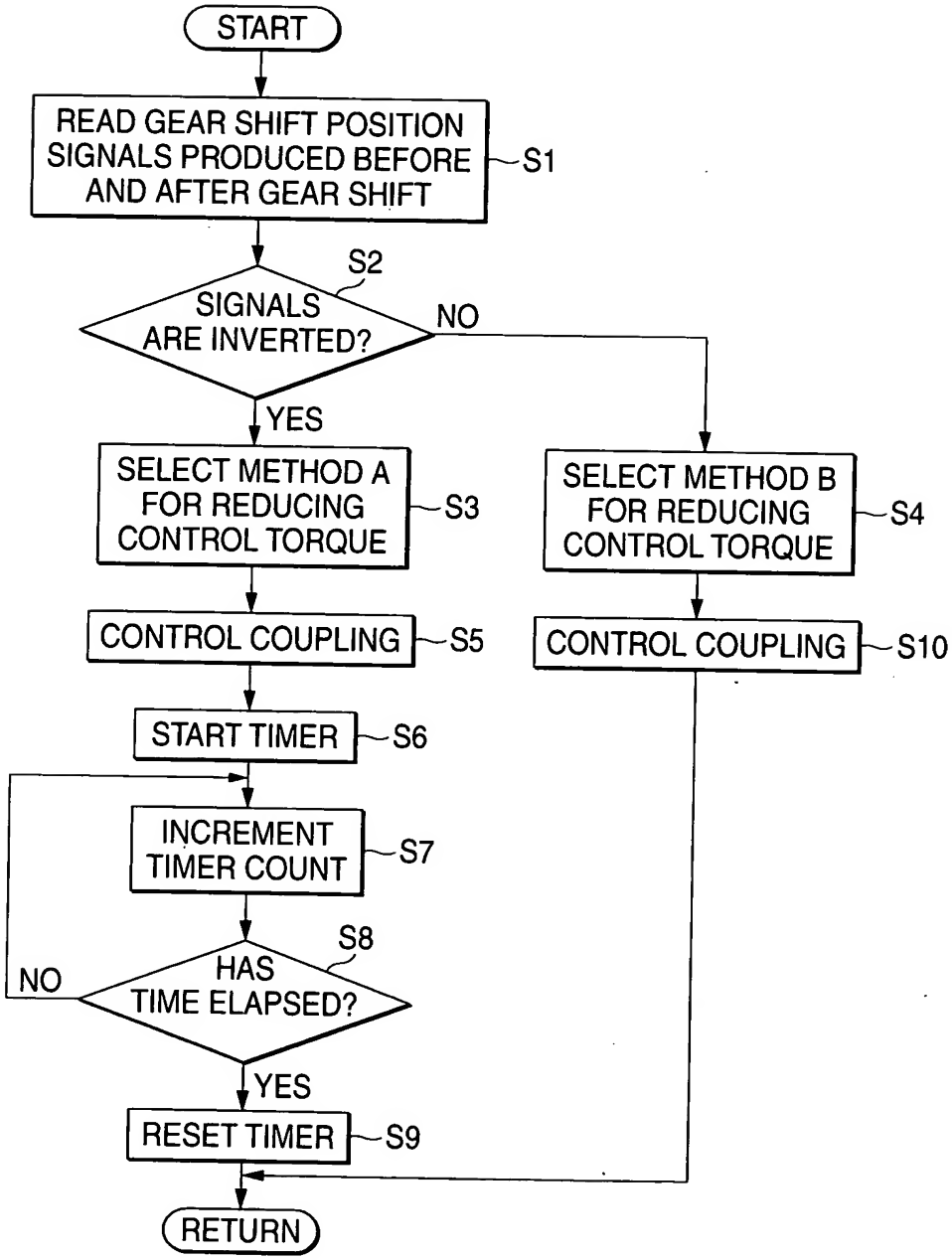
START
READ GEAR SHIFT POSITION SIGNALS PRODUCED BEFORE AND AFTER GEAR SHIFT
S1
S2
SIGNALS ARE INVERTED?
NO
YES
SELECT METHOD A FOR REDUCING CONTROL TORQUE
S3
SELECT METHOD B FOR REDUCING CONTROL TORQUE
S4
CONTROL COUPLING
S5
CONTROL COUPLING
S10
START TIMER
S6
INCREMENT TIMER COUNT
S7
S8
HAS TIME ELAPSED?
NO
YES
RESET TIMER
S9
RETURN

FIG. 9A

RANGE
N
R
1ST-X

FIG. 9B

RANGE (THIS TIME)	DIRECTION OF M/T RANGE (THIS TIME)
R	1
N	RETAINED (DIRECTION OF PREVIOUS RANGE)
1ST-X	0

FIG. 9C

DIRECTION OF PREVIOUS M/T RANGE XOR DIRECTION OF M/T RANGE OBTAINED THIS TIME	INVERSION OF M/T RANGE
0	NON-INVERTED
1	INVERTED

XOR: EXCLUSIVE OR RESULT

FIG. 10

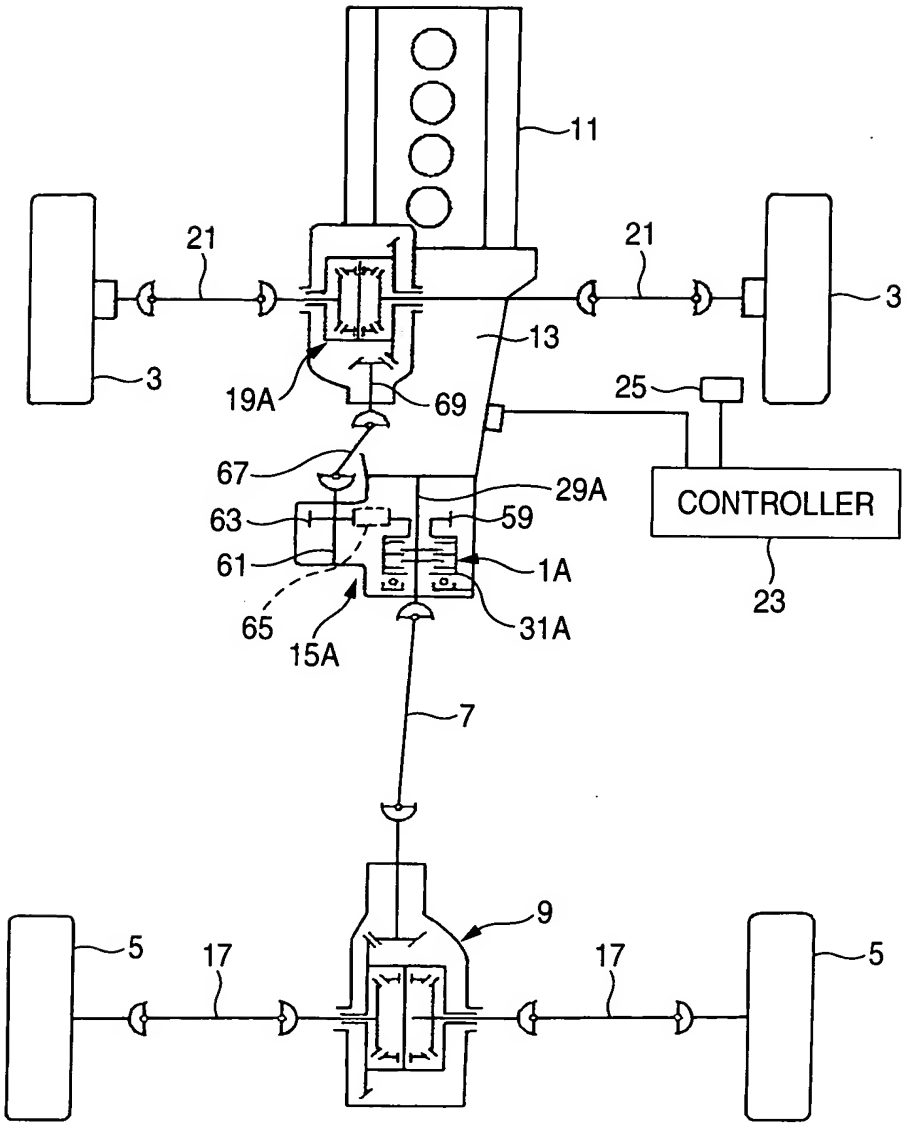
11
21
21
3
3
13
19A
69
25
67
29A
CONTROLLER
63
59
61
1A
23
65
15A
31A
7
9
5
17
17
5

FIG. 11

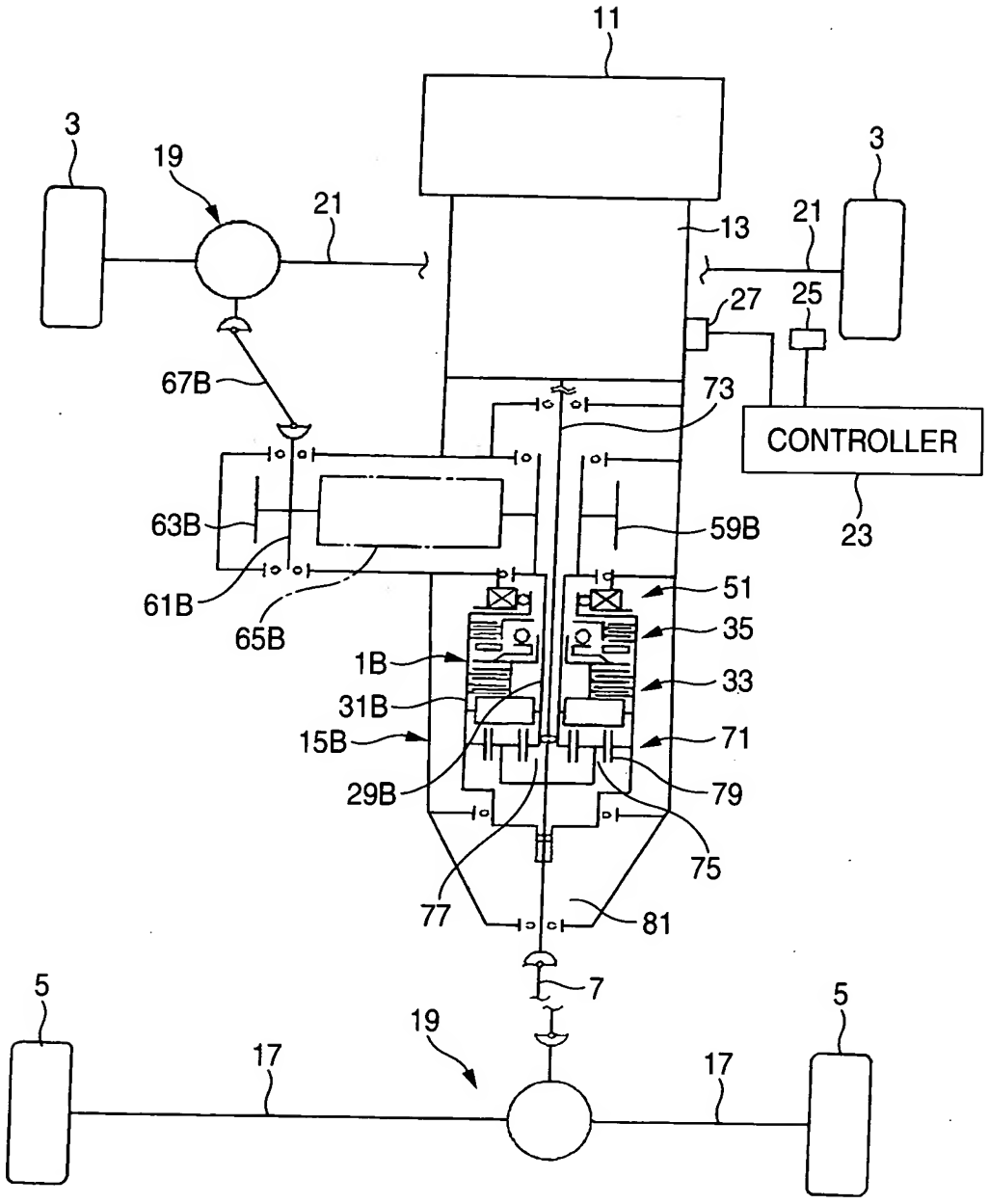
11
3
19
21
13
21
3
27
25
67B
73
CONTROLLER
63B
59B
23
61B
65B
51
35
1B
33
31B
15B
71
29B
79
75
77
81
7
5
19
5
17
17

FIG. 12

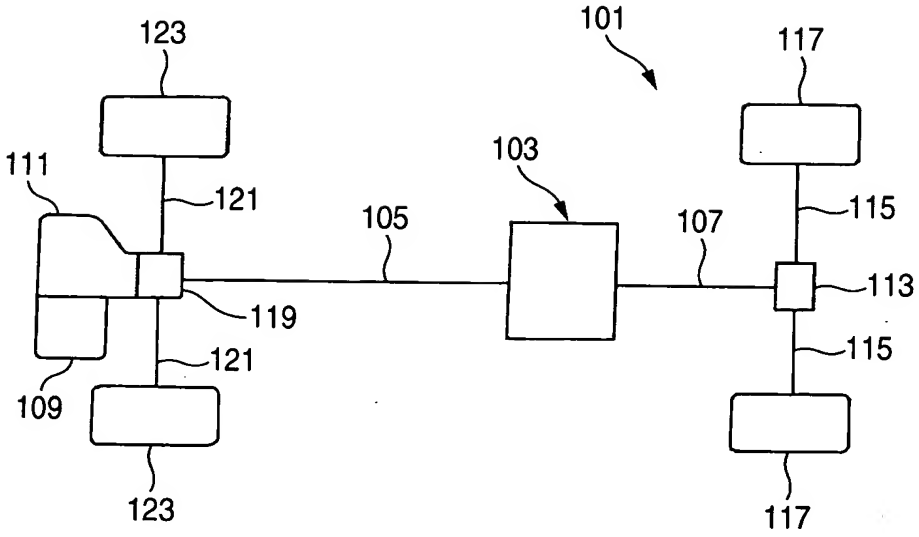

FIG. 13

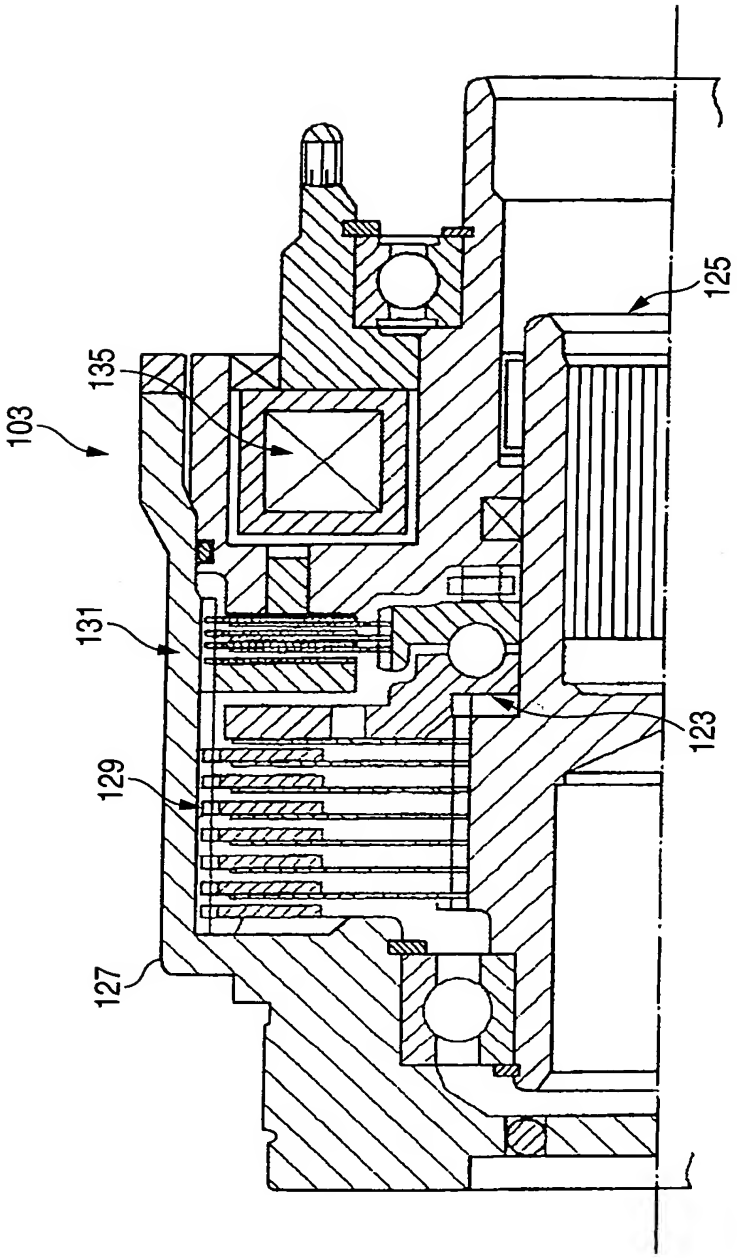

FIG. 14A

FIG. 14B

FIG. 14C

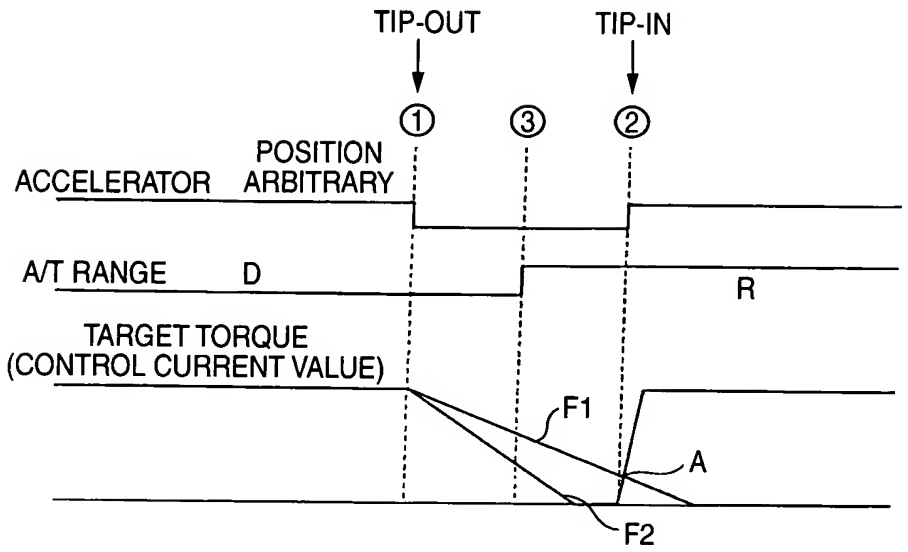

FIG. 15A

FIG. 15B

FIG. 15C